



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,535	05/25/2006	Daisuke Kumaki	0756-7707	5741
31780 7590 07/07/2010 Robinson Intellectual Property Law Office, P.C. 3975 Fair Ridge Drive Suite 20 North Fairfax, VA 22033				
EXAMINER				
LI MEIYA				
ART UNIT		PAPER NUMBER		
2811				
MAIL DATE		DELIVERY MODE		
07/07/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/580,535

Applicant(s)

KUMAKI ET AL.

Examiner

MEIYA LI

Art Unit

2811

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2010.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27-36 and 47-56 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 27-36 and 47-56 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/GS/US)
4) ☐ Interview Summary (PTO-413)
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____
Paper No(s)/Mail Date _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 27-35 and 47-55 are rejected under 35 U.S.C. 102(e) as being anticipated by Matsumoto et al. (2005/0098207).

As for claims 27, 47 and 33, Matsumoto et al. show in Figs. 1-3 and related text a light-emitting element 210 comprising:

an anode 11 and a cathode 17; and

a first layer 13 containing a light-emitting material;

a second layer 18 containing a first organic compound 14 and a first material (or metal) 15 having an electron donor property for the first organic compound, the second layer being in direct contact with the first layer; and

a third layer 16 containing a second organic compound NPB and a second material (or metal oxide) V_2O_5 having an electron acceptor property for the second organic compound, the third layer being in direct contact with the second layer,

wherein the first layer, the second layer, and the third layer are interposed between the anode and the cathode, and the third layer is in contact with the cathode.

As for claims 28 and 48, Matsumoto et al. show the first organic compound is an organic compound having an electron transporting property ([0090]-[0096]).

As for claims 29 and 49, Matsumoto et al. show the first organic compound is a metal complex having a ligand with a π -conjugated skeleton.

As for claims 30 and 52, Matsumoto et al. show the first material (or metal) having the electron donor property is an alkali metal, an alkaline earth metal, or a rare earth metal ([0091], lines 2-4).

As for claims 31 and 50, Matsumoto et al. show the second organic compound is an organic compound having a hole transporting property ([0107], lines 4-5; [0109], lines 7-9).

As for claims 32 and 51, Matsumoto et al. show the second organic compound is an organic compound having an aromatic amine skeleton ([0107], lines 4-5).

As for claims 34 and 54, Matsumoto et al. show the cathode being in contact with the third layer is made from a conductive material formed by sputtering ([0109], lines 10-11).

Regarding the process limitations ("forming by sputtering"), these would not carry patentable weight in this claim drawn to a structure, because distinct structure is not necessarily produced.

Note that a "product by process" claim is directed to the product per se, no matter how actually made, *In re Hirao*, 190 USPQ 15 at 17 (footnote 3). See also *In re Brown*, 173 USPQ 685; *In re Luck*, 177 USPQ 523; *In re Fessmann*, 180 USPQ 324; *In re Avery*, 186 USPQ 161; *In re Wertheim*, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); and *In re Marosi et al.*, 218 USPQ 289, all of which make it clear that it is the patentability of the final product per se which must be determined in a "product by process" claim, and not the patentability of the process, and that an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not. Note that the applicant has the burden of proof in such cases, as the above case law makes clear.

As for claims 35 and 55, Matsumoto et al. show the conductive material is transparent to visible light (aluminum becomes transparent at a thickness of 10 nm; Fig. 3, Example 1).

As for claim 53, Matsumoto et al. show the metal oxide comprises at least one compound selected from the group consisting of vanadium oxide, chromium oxide, molybdenum oxide, cobalt oxide, and nickel oxide ([0109], line 7).

3. Claims 36 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al. (2005/0098207) in view of Tyan et al. (6,917,149).

As for claims 36 and 56, Matsumoto et al. disclosed substantially the entire claimed invention, as applied to claims 27 and 47, respectively, above, except a part of the first layer comprises molybdenum oxide.

Tyan et al. teach a part of a first layer comprises molybdenum oxide (Col. 8, lines 7-20).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to comprise a part of the first with molybdenum oxide, as taught by Tyan et al., in Matsumoto et al.'s device, in order to improve the electroluminescent characteristics of the device. Furthermore, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Response to Arguments

4. Applicant's arguments with respect to claims 27-36 and 47-56 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MEIYA LI whose telephone number is (571)270-1572. The examiner can normally be reached on Monday-Friday 8:00AM-4:30PM Eastern Standard Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Gurley can be reached on (571) 272-1670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lynne A. Gurley/
Supervisory Patent Examiner, Art
Unit 2811

/M. L./

Application/Control Number: 10/580,535

Page 7

Art Unit: 2811

Examiner, Art Unit 2811

7/1/2010